

Edwards (Wm A.)

abl

COMPLIMENTS OF  
WILLIAM A. EDWARDS.

---

THE CLIMATE OF SOUTHERN CALIFORNIA  
IN RELATION TO DISEASE.

BY

WILLIAM A. EDWARDS, M.D.

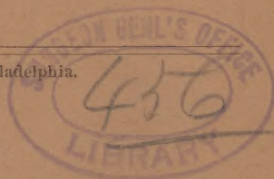
---

Reprinted from **THE CLIMATOLOGIST**, August, 1891.

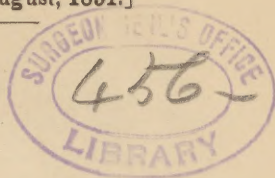
---

---

Collins Printing House, 705 Jayne Street, Philadelphia.







## THE CLIMATE OF SOUTHERN CALIFORNIA IN RELATION TO DISEASE.

By WILLIAM A. EDWARDS, M.D.,

SAN DIEGO, CALIFORNIA.

Fellow of the College of Physicians of Philadelphia; American Pediatric and Pathological Societies; formerly Instructor in Clinical Medicine, University of Pennsylvania; Physician to St. Joseph's Hospital, and Associate Pathologist, Philadelphia Hospital, etc.

A CORRECT appreciation of the climate of this region is only to be gained after a year's residence at least. As a recent popular writer has remarked, one should stay here the year through and select the days that suit his idea of winter from any of the months. From the fact that the greatest humidity is in the summer and the least in the winter months, he may wear an overcoat in July in a temperature according to the thermometer, which, in January, would render the overcoat unnecessary. For example, the afternoon temperature at San Diego in December, January, February, March was, respectively,  $60.5^{\circ}$ ,  $60.9^{\circ}$ ,  $57.7^{\circ}$ ,  $62.4^{\circ}$ , and in July it was  $63.4^{\circ}$ ; the maximum temperature for July was  $79^{\circ}$ , and for January  $74^{\circ}$ . The greatest difference in temperature occurs at night, but this is more marked in the interior valleys than on the coast, and is shown by the fact that in January Los Angeles shows a register of  $46.5^{\circ}$ , and San Diego  $47.5^{\circ}$  at 7 A.M., and at 3 P.M. the figures stand respectively, Los Angeles  $65.2^{\circ}$ , and San Diego  $60.9^{\circ}$ . The writer above referred to further remarks that in summer the difference is even greater, as he has observed the thermometer in Los Angeles reach  $103^{\circ}$  when it was only  $79^{\circ}$  in San Diego, adding that the weather is unendurable in New York at  $89^{\circ}$ , while the day heat in California at  $103^{\circ}$  is not oppressive.

The unusual equability of the coast region with San Diego, as an example, will be apparent from the following statements compiled from the U. S. Signal Service reports for the station at San Diego:—



						TEMPERATURE.		
						Mean.	Max.	Min.
April, 1889	.	.	.	.	.	67.8°	83°	47°
May "	.	.	.	.	.	66.9	80	50
June "	.	.	.	.	.	69.2	72	56
July "	.	.	.	.	.	73.2	84	56
August "	.	.	.	.	.	76.7	89	62
Sept. "	.	.	.	.	.	77.6	91	54
October "	.	.	.	.	.	65.0	80	52
Nov. "	.	.	.	.	.	71.6	83	46
Dec. "	.	.	.	.	.	62.5	69	40
Jan. 1890	.	.	.	.	.	51.0	66	35
Feb. "	.	.	.	.	.	54.4	77	38
March "	.	.	.	.	.	55.8	74	41

The same official report for 1887, for example, shows the mean temperature at San Diego at 3 P.M. to be as follows: January, 60.9°; February, 57.7°; March, 62.4°; April, 63.3°; May, 66.3°; June, 68.5°; July, 69.6°; August, 69.6°; September, 69.5°; October, 69.6°; November, 64.4°; December, 60.5°. A glance at this table will show that the months of July, August, September, and October presented a three o'clock temperature with hardly an appreciable difference. As I have already remarked, the greatest difference in the temperature occurs at midnight and just before sunrise, hours at which most people, particularly the health-seekers, are not exposed to alternations in temperature.

Let us for a moment consider the all-important question of rainfall, humidity, and relative humidity. The report referred to above, for the same twelve months, shows the following rainfall in inches. April, 0.19; May, 0.03; June, 0.10; July, trace; August, 0.04; September, trace; October, 2.12; November, 0.12; December, 7.71; January, 2.79; February, 1.70; March, 0.31. To quote from the report of the Chairman of the Committee of Medical Topography and Meteorology of the Medical Society of the State of California, Dr. Henry D. Robertson: "That there are cycles of changes occurring with more or less regularity in our meteorological and climatic conditions is recognized by all students on this subject. We will state that for the past decade or perhaps longer, the mean average rainfall for the coast gradually decreased until the beginning of the last rainy season, when a sudden and complete revulsion seems to have taken place,

and now we record the greatest rainfall that the coast has experienced since observations have been taken and recorded. Yet, notwithstanding the fact that these observations were taken during a season which presented an unusual rainfall, San Diego presents but 15.11 inches of rainfall in twelve months."

The so-called rainy season in this section usually begins in November—October may have presented a few slight showers—and it lasts until about the middle of April. One must remember, however, that this rain period is not one of continuous down-pour, but is pleasantly interspersed with bright, warm days and dazzling sunshine, and above all, that the rain is most liable to fall at night. Here, again, we find it difficult to make a hard and fast statement, as the seasons even in this land of equable climatic conditions are liable to vary greatly in the total rainfall and its distribution. For example, the average yearly rainfall at San Diego is 11 inches, but for the season of 1876 and 1877 the total only reached 3.75 inches, and in the years 1883 and 1884 the unusual rainfall of 25.77 inches was recorded. At Los Angeles, for the same years respectively, the figures stand 5.28 and 38.22.

With these figures one can readily appreciate the fact that there are few days during the winter months on which one cannot be out of doors for at least a portion of the twenty-four hours. As the rains occur while the winds are from the south and discontinue as soon as the prevailing western wind appears, the atmosphere at once clears, and, as there is an entire absence of the enervating, steamy heat of the Atlantic coast, one can immediately resume his out-door life. It is a well-known fact that a thermometrical heat which would be enervating in other localities is stimulating in Southern California. The coast fog, about which so much has been written, is most frequent in this region during the months of April and May. The fog bank usually rolls in about night-fall and disappears a few hours after sunrise. Generally by 9.30 A.M. the coast is entirely free from fog. During these months there may be two or three days on which the fog will be more persistent, and a fine mist may last until 12.30 or 1 P.M., but this only perhaps a half dozen days out of the year. I cannot better conclude this hasty sketch of the climatic conditions of Southern California, with San Diego as an example,



than by quoting the words of Charles Dudley Warner: "I do not know whether the San Diego climate would be injured if the hills were covered with forests and the valleys were all in the highest and most luxuriant vegetation. The theory is, that the interaction of the desert and ocean winds will always keep it as it is, whatever man may do. I can only say that, as it is, I doubt if it has its equal the year round for agreeableness and healthfulness in our Union; and it is the testimony of those whose experience of the best Mediterranean climate is more extended and much longer continued than mine, that it is superior to any on that inclosed sea. About this great harbor, whose outer beach has an extent of twenty-five miles, whose inland circuit of mountains must be over fifty miles, there are great variations of temperature, of shelter and exposure, minute subdivisions of climate, whose personal fitness can only be attested by experience. There is a geniality about it for which the thermometer does not account, a charm which it is difficult to explain. Much of the agreeability is due to artificial conditions, but the climate man has not made or marred.

"It is a true marine climate, but a peculiar and dry marine climate, as tonic in its effect as that of Capri, and I believe with fewer harsh days in the winter season."

Within the last two decades the study of physical geography has done much to inform the medical mind of the various climates of the world; but unfortunately exact statistics showing the effect of climate upon the physiological functions of the organism are yet to be formulated; and no less important is it that our knowledge of the effect of climate upon bacterial life is meagre, so much so that at the present day we must confess our ignorance of the scientific knowledge of the healing properties of a given climate in contradistinction to those of another locality; hence it is that so much difference of opinion exists in regard to the relative importance of the different meteorological elements.

*Phthisis*.—Not many years ago the various climatic localities were selected by the clinician depending upon the view which he entertained of the etiology of the disease; but now that a consensus of opinion has been gained in accepting two broad classes of the disease, viz: bacilliary and non-bacilliary phthisis, recog-

nizing, of course, that unhygienic surroundings have much to do with bacillary invasion, we can approach the subject with more confidence in our ability to solve the problem.

The following classification will, we think, be accepted by most clinicians to-day :—

- 1st. *Acute Miliary Tuberculosis*.—An acute infectious disease due to an overwhelming number of bacilli, probably entering the blood current and becoming thus widely and rapidly disseminated.
- 2d. *Disseminated Tuberculosis*—for example, mesenteric phthisis of children, in which there is general infection, but by fewer bacilli, the dose not being immediately overwhelming, but the microbes entering the blood in colonies.
- 3d. *Tuberculous Pneumonia*—following the inspiration of large numbers of bacilli, or auto-infection by a lung cavity.

It must be remembered that infection by the bacillus may occur in various ways. Kelch, Vaillard (Bull. de la Soc. Méd. des Hôp. de Paris, quoted by Bruen, Med. News, Oct. 1888) have shown that a large number of pleurisies are tubercular in origin, and that the bacilli may enter by the canals or ducts which penetrate a part, or by its blood and lymphatic vessels. From these statements we conclude that infection usually occurs through the alimentary or respiratory systems ; and that it may occur through the genito-urinary tract, or by the cutaneous or muco-cutaneous surfaces.

If, then, we desire to select a climate for those predisposed to phthisis, or for the malady itself in the incipient stages, we should in a general way select that locality where we will first and foremost strengthen and stimulate the general physiological structure of the patient, and in this way antagonize or retard the progress of the disease.

It is a well-known and accepted fact that the extent, and, indeed, the character of the lesions in tuberculosis are due first to the numerical strength of the bacilli ; and secondly to the manner in which they gain entrance to the tissues. It is also a well-known fact that the climate which will destroy the life of the bacillus is yet to be found.



With this premise let us see the advantages which Southern California offers to the phthisical, or to those predisposed to phthisis.

It must be borne in mind that, as Cullen most aptly remarks, "the air of any place is better for the patient than that in which he grew ill;" and we must also remember that there can be no hard and fast rule for the selection of a climate; but this must be regulated by individual peculiarities. Some will improve or thrive in a warm or hot climate; others in a cool or cold environment; some at sea-level, others at an altitude in rarefied air; but all will probably do best in a dry locality, with a superabundance of sunshine. Variability and equability must be considered in individual cases. The former is of less importance than the latter, which in many cases is to be considered as one of the most important factors.

In Southern California one may find all of these conditions, from the warm equable climate of the coast, where, as we have already shown, the variation of temperature is of the slightest degree possible, and the rainfall is at a minimum, up to an altitude of 12,000 feet, in the San Bernardino Mountains, with the meteorological conditions which we all know are found at this height, down to a basin in the eastern part of San Diego County, 360 feet below the level of the sea.

The county of San Diego presents within its boundaries various altitudes, as seen in the following table, in which a few localities are selected as examples:—

City of San Diego	.	.	.	.	.	sea level to 225 feet
Santa Maria Valley	.	.	.	.	.	1800 "
Alpine	.	.	.	.	.	2200 "
Cuyamaca District	.	.	.	.	.	4500 to 4700 "
Strawberry Valley	.	.	.	.	.	5200 "
Tanquitz Valley	.	.	.	.	.	7500 "
Tamarack Valley	.	.	.	.	.	9000 "
Mount San Jacinto	.	.	.	.	.	11,100 "

At an altitude of about 2,500 feet, and on the highest peak, the country is thickly wooded with magnificent specimens of fir, pine, and oak trees; the earth is carpeted with wild flowers as only California can present them in all their grand profusion; the mountain streams remain active throughout the year, and do not



turn "bottom side up," as those of lower altitudes during the dry season.

In contradistinction to these mountainous districts, which allow the physician to obtain all the benefits of high altitudes combined with a most desirable climate, San Diego County also presents a most remarkable depression in the earth's surface, known locally as the Conchilla Valley, and geographically as the San Felipe Sink. The invalid may reside at Indio, 20 feet below sea-level, or at Beaumont 2500 feet above sea-level, in close proximity to this basin, and make excursions to "nature's pneumatic cabinet," descending to the lowest point, 360 feet below the sea, in a warm, dry atmosphere, with a very low relative humidity, where good water is supplied by artesian wells, and much of the land is under cultivation with oranges, melons, and other fruits. The locality is much sought by consumptives, asthmatics, and rheumatics.

At 360 feet below the sea the atmospheric pressure is not, of course, so great as in the cabinet; but it must be remembered that a patient receives but two or three *séances* a week, whereas in this valley he is constantly subjected to a moderately compressed air day and night, if he selects Salton as his residence.

Smith,<sup>1</sup> in referring to the beneficial effects of the increased oxygen inhaled, says that compressed air is useful in catarrh of the mucous membrane; in acute and subacute inflammation of the respiratory mucous membrane; in restoring the permeability of air-tubes occluded by exudation or otherwise; in asthma, in pulmonary hemorrhage, in pleuritic effusion, in simple anæmia, in inveterate cases of psoriasis and ichthyosis, and in the various forms and stages of phthisis.

We now know that extreme elevations do not present immunity from phthisis. The high localities of Ertz and Reisingebirge in Saxony present a large percentage of phthisical affections in contradistinction to the Sandwich Islands, which previous to 1778 were almost exempt from the disease; but now in this century the race is almost disseminated—a further illustration of the universal presence of the bacillus tuberculosis from sea-level to mountain peak.

<sup>1</sup> The Physiological, Pathological, and Therapeutic Effects of Compressed Air, quoted by Lindley. N. Y. Med. Record and South. Cal. Practitioner.

In California of the South, owing to the peculiar topography and the enormous size of the State, we are able to surround our patient with many and varied climatic conditions within a few hours. At the coast he may be subject to the beneficial effects of sea air, which is so marked in the catarrhal processes of phthisis, or of subacute or chronic bronchitis. Furthermore, an ocean climate assures him of great purity of atmosphere with an abundance of ozone, conditions which are most soothing to an overwrought nervous system. If he can obtain these conditions without the soil dampness so prevalent on the Atlantic coast, and so conspicuous by its absence on the lower coast of Alta California, he will in many cases be situated in an environment which will retard the progress of his disease primarily by its effect upon his general condition, and allow him to derive all the benefit referred to. Experience has taught me that non-tubercular cases will do best under this plan of life, but that the other forms of pulmonary disease do best between sea-level and 700 or 800 feet elevation. In support of these statements I will cite several cases from my note-book that have been under my observation for periods varying from one year to two and a half years.

CASE 1.—A. B. æt. 37, ordered west by Dr. Loomis, of New York, came under my observation two and a half years ago, with dense consolidation of left upper lobe, flattened chest, and marked subacute laryngitis, weight 134, height 5 feet 11 and a half inches, nightsweats, cough, diarrhœa. *Status præsens*: weight 158, no laryngitis, left upper lobe consolidated, but to a less extent, no rales, no expectoration, no nightsweats, lives in the open air, rides daily, cultivates personally five acres of land, no bacilli.

CASE 2.—Mrs. C. D., diagnosis of phthisis made by Drs. Carrol, Morgan, and Bliss, of Washington, D. C., came under my observation one year ago, after living three years in Southern California. The note at that time reads: Deficient expansion both apices, most marked on left side, auscultation, bronchial breathing and bronchophony pronounced over left anterior apex from clavicle to third rib; right apex anteriorly, deficient expansion, slight bronchial respiratory murmur, posteriorly same side; just above spine of scapula a distinct but small vomica is situated, percus-

sion resonance impaired over area under consideration, no rales, no expectoration. Diagnosis, fibroid phthisis; *stat. praesens*, no material change; have advised a three months' residence at an altitude of 1500 feet, to assist expansion; no bacilli.

CASE 3.—Mr. E. F. was under the care of David L. Huntingdon, Major and Surgeon U. S. Army, for the past eight months, and was turned over to me when that officer was ordered to St. Augustine. I am informed by Dr. Huntingdon that during these months no retrogression occurred, and I find the lungs upon examination to present the same physical signs as described by the patient's physicians in the East one year ago. Has had several slight hemorrhages, so have sent him to the interior at an elevation of 2200 feet. Bacilli have been present in small numbers for several months.

CASE 4.—G. H., æt. 45, admitted to the San Diego County Hospital a number of times, and through the kindness of Dr. J. P. Lefevre, I have had the opportunity of watching the case. The patient was first admitted to hospital several years ago. He remains a few months, goes out on liberty, and usually returns to hospital after a protracted debauch. Notwithstanding, his lungs have remained about in the condition recorded at first admittance, that is, marked consolidation of right upper lobe, no rales, no expectoration, fibroid change. The longer my residence in this locality the more forcible and apt seems the remark of Bruen (Medical News, Oct. 13, 1888): the consideration of the etiology of phthisis would indicate that climate is of value to the individual predisposed to phthisis, not by a single or specific quality of the air, or by any definite combination of meteorological conditions, but by pure air uncontaminated by miasm, organic or inorganic substances. The chief purpose of climate change is to increase cellular resistive power.

In a series of statistics compiled by Bullard (Trans. Medical Society, State of California, 1890), it is shown that the percentage of phthisis to other diseases among the native population is only  $4\frac{4}{10}$  per cent., whereas in the foreign population, that is those from other States, it is  $43\frac{1}{2}$  per cent. 47 per cent. of those admitted to hospitals in Southern California have been in the State less than one year.



*Pneumonia*.—The writer, after a residence of nearly three years in this country, has seen but three cases of pneumonia, and all in consultation practice, one of which must be excluded from consideration at the present time. This case occurred in the practice of Dr. Bowditch Morton, and was seen by me in the second week of the disease. I was informed that the patient, a large plethoric woman, had entered “a cold storage-room” while in a perspiration from walking. Certainly we cannot class this case among those studied from the standpoint of locality. Recovery occurred within the usual time.

The other case occurred in a young man of 22 years, as a sequela of the gripe, and was fatal in five days. The third case was a frank croupous pneumonia, in the person of a stout, thick-set man 64 years of age. I was called to consult with D. L. Huntingdon, Major and Surgeon U. S. Army, on the second day of the disease; the patient died within the week of heart-clot. This pneumonia was of a nature similar to the pneumonia observed in the East, and differs in no way from the writer’s experience of the disease in Philadelphia.

A recent writer, Remondino, in the Southern California Practitioner, says that he has seen but two cases of pneumonia in 16 years—both the result of chill while perspiring. In Los Angeles County, in a total of 664 deaths, pneumonia appears as the cause but in 2.41 per cent. of this total. The report of the Health Department of the city of San Diego from July to December, 1888, inclusive, shows but 12 deaths from pneumonia: three occurred in November, and five in December.

The writer has not met with any cases of pleurisy, asthma, or bronchitis in the native population. All the cases of these maladies which have been observed have occurred in those who have sought this State in order to restore their health, and have either suffered from one of these diseases in their homes, or have developed them owing to their weakened condition from prolonged illness.

Baker, in a paper before the Ninth International Medical Congress (quoted by Rohé), has shown in a convincing manner by diagrams and tables that the rise and fall of sickness from pneumonia, bronchitis, influenza, tonsillitis, croup, diphtheria, and scarlet fever, are more or less controlled by the fluctuations of

atmospheric temperature, the diseases being increased by a lower, and diminished by a higher, temperature.

*Kidney Affections.*—It is in renal disorders that the country under consideration presents an almost unique record. This is well illustrated in a case of chronic interstitial nephritis which was under my care for nearly two years, the latter part of which was spent in my private hospital, thus allowing an almost constant record of the disease. The patient, aged 55, contracted renal disease from exposure during the war. In 1884, he came to California with the following urinary record, made by Tyson, of Philadelphia, on December 6th, 1884: "Sp. gr. 1010; color, yellow; reaction, neutral; quantity and character of sediment, trifling, heavy; abnormal constituents in solution; albumen about  $\frac{1}{40}$ th the bulk of urine tested. Sediment. A moderate number of hyaline casts; numerous crystals of the triple phosphates."

As far as it is possible to judge there was probably here a contracted kidney. The patient, himself a physician, was in a position to gain all the benefit from a mild equable climate, and after much change and a careful study of the various localities in Southern California, settled upon San Diego as presenting, at least for him, the most acceptable environment. The urinary secretion remained about as indicated in the above report. The man was able to pursue a fairly active life; the skin assumed an excretory function which was very remarkable; and in view of the post-mortem examination it seemed probable that life was prolonged and the equilibrium maintained solely through this supplementary action of the cutaneous surfaces. Eleven days before death urea was excreted by the skin to such an extent that, as crystallization occurred, the patient presented the appearance of one in a snow-storm. The hair and beard were matted with this incrustation, and the entire skin was covered to such an extent that after death the attendants, with a piece of stiff card-paper, scraped off an ounce of these crystals in a very few moments. The kidneys weighed but two and a quarter and three ounces respectively. They were practically devoid of excretory power, and were much more advanced in disease than I have ever before noted them in a somewhat extended experience at the post-mortem table. It appears, then, that a residence in a suitable locality, while it will not of

course arrest well-marked kidney lesions, will at least prolong life to a degree far beyond the natural expectancy, and present us with specimens which are in themselves proof of this prolongation of life by the advanced state of the lesions. The constant skin activity, much of which is manifested as insensible perspiration, lowers arterial tension and depletes in a most beneficial manner, relieving the overtaxed renal circulation and the diseased parenchyma. Furthermore, the patient will be protected from the dangers of intercurrent or concomitant maladies which are so apt to prove fatal to one with renal inadequacy.

Space forbids a further consideration of this subject. But the future will show that in Southern California, from sea level to 2000 feet, the physician has at his command the climatic conditions which will prolong the life of those suffering from chronic renal disorders; and if the change is made soon enough, when the connective tissue is yet embryonic, it is but reasonable to suppose that, with decreased tension, an active skin, freedom from intercurrent renal congestions, and a constant outdoor life, the diseases may be arrested or removed.

J. C. Wilson and Loomis (Transactions of the American Climatological Association, 1889) consider that there is reason to believe that low temperature, rapid change of temperature, and high altitudes are unfavorable elements, whereas equability and warmth are favorable influences.

*Rheumatism.*—The rheumatic will find in a properly selected locality in this country, which presents so many minute subdivisions of climatic factors, almost entire immunity from his affection. It is a mistaken conception to consider the coast strip, from Monterey to San Diego, as inimical to the rheumatic's welfare.

It cannot be considered that rheumatic maladies, which arise in Southern California among the native population or those long resident here, are the result of any climatic conditions. The specific originating cause of rheumatism is not by any means removed from the arena of controversy. A review of current medical literature will speedily convince one that we are far from a consensus of opinion on this subject; and it is but fair to suppose that our climate presents nothing in itself which will retard the



operation of this cause within the individual any more than, as we have already remarked, the climate has yet been discovered that will kill the bacillus tuberculosis. Those who, in addition to the ordinary manifestations of rheumatism, present a peculiar susceptibility to changes in the weather, either to extreme heat or cold dampness; those who, like the well-known West Point professor, are slaves to the clouds; or those cases which are neuralgic in nature, with or without a rheumatic taint, such as have been recently so ably studied by Cantling, a perusal of whose experience will well repay the time spent, under the title of "The Relationship of Atmospheric Electricity, Magnetic Storms, and Weather Elements to a Case of Neuralgia," in the Medical News, May 2, 1891, will find almost entire immunity from their tortures somewhere in Southern California. The exact location they must decide for themselves by personal experience.

At present I have under my care a severe and long-continued case of neuralgia that does well in the Santa Maria Valley, 1500 feet above the sea, where the temperature is apt to be in the nineties.

One should endeavor to avoid a location which presents great diurnal temperature range, or in which there is great difference between midday and midnight thermometrical records.

*Erysipelas*.—In an air that is so free from germs that meat may be hung exposed to the dry winds almost indefinitely—a process of desiccation always occurring, putrefaction never arising—it is but reasonable to suppose that Fehleisen's coccus (Meerovitch streptococcus of erysipelas), whose etiological relation to the disease is demonstrated beyond question, is, if present at all, surrounded by an environment which is inimical to its virulence. Certain it is that erysipelas is among the more rare diseases that we meet in our practice. Bullard's statistics show but one death in eleven years, and demonstrates the fact that in all Southern California erysipelas is only about half as frequent as in the rest of the United States. Two years and a half in active hospital practice in Southern California has failed to bring forth a single case.

*The Climatology of Old Age*.—Advancing years may be robbed of many concomitant infirmities by residence in a suitable local-

ity. The aged are rarely safe in a high altitude; nor can they with impunity change their station from low to high altitudes, more particularly should they suffer from chronic pulmonary disease, bronchitis, bronchiectasis, fibroid phthisis, or the like. A dilated, fatty heart is an absolute contraindication to removal from sea level. On the whole, a marine climate is preferable for the aged, and if it is warm and equable, so much the better, as gout and rheumatism may be warded off; or, if present, the severity of their manifestations may be lessened.

Cystitis, so often an attendant of advanced years and so apt to be aggravated by damp, changeable weather, will be markedly benefited by our warm, equable climate.

Insomnia, the plague of the old, and sometimes the torture of the young, will find most speedy relief at the coast. Indeed, the writer has observed most gratifying results in this respect after a sojourn of even a few months.

Dutton, whose conclusions I most fully indorse, in the *Boston Medical and Surgical Journal*, May 10, 1889, answers the question: What class of patients should be sent to Southern California? as follows:—

“Those who are so enfeebled as to suffer from the severities of a northern winter; the overworked and those needing rest; the prematurely old; the rheumatic; the sufferer from incipient phthisis; the victim of bronchial troubles; the dyspeptic; and, in fact, all generally enfeebled people.”

In conclusion, I must state that a careful review of the literature pertaining to Southern California as a health resort convinces me that much of it has been written either by those who have never been in the State or who have made their observations as tourists from the windows of a rapidly moving train. To repeat, a correct appreciation of the climate of this region is only to be gained after a year's residence at least. Personally, I have refrained from expressing my views on this matter until the present time, after a residence of nearly three years.





*Published the 15th of each Month.*

# THE CLIMATOLOGIST.

## A MONTHLY JOURNAL OF MEDICINE,

DEVOTED TO THE

Relation of Climate, Mineral Springs, Diet, Preventive  
Medicine, Race, Occupation, Life Insurance,  
and Sanitary Science to Disease.

---

EDITED BY

JOHN M. KEATING, M.D.,  
FREDERICK A. PACKARD, M.D., CHARLES F. GARDINER, M.D.

---

ASSOCIATE EDITORS:

VINCENT Y. BOWDITCH, M.D., Boston, Mass.  
NORMAN BRIDGE, M.D., Los Angeles, Cal.  
SAML. R. BURROUGHS, M.D., Raymond, Tex.  
J. WELLINGTON BYERS, M.D., Charlotte, N. C.  
J. M. DaCOSTA, M.D., Philadelphia, Pa.  
CHARLES DENISON, M.D., Denver, Colo.  
GEORGE DOCK, M.D., Galveston, Texas.  
WM. A. EDWARDS, M.D., San Diego, Cal.  
J. T. ESKRIDGE, M.D., Denver, Colo.  
SAMUEL A. FISK, M.D., Denver, Colo.  
W. H. GEDDINGS, M.D., Aiken, S. C.  
JOHN B. HAMILTON, M.D., Chicago, Ill.  
T. S. HOPKINS, M.D., Thomasville, Ga.  
FREDERICK I. KNIGHT, M.D., Boston, Mass.  
ALFRED L. LOOMIS, M.D., New York City.

HENRY M. LYMAN, M.D., Chicago, Ills.  
R. L. MACDONNELL, M.D., Montreal, Canada.  
FRANCIS MINOT, M.D., Boston, Mass.  
WILLIAM OSLER, M.D., Baltimore, Md.  
WILLIAM PEPPER, M.D., Philadelphia, Pa.  
BOARDMAN REED, M.D., Atlantic City, N. J.  
J. REED, JR., M.D., Colorado Springs, Colo.  
GEORGE H. ROHE, M.D., Baltimore, Md.  
KARL VON RUCK, M.D., Asheville, N. C.  
FREDK. C. SHATTUCK, M.D., Boston, Mass.  
S. E. SOLLY, M.D., Colorado Springs, Colo.  
G. B. THORNTON, M.D., Memphis, Tenn.  
E. L. TRUDEAU, M.D., Saranac Lake, N. Y.  
J. B. WALKER, M.D., Philadelphia, Pa.  
J. P. WALL, M.D., Tampa, Florida.

JAMES C. WILSON, M.D., Philadelphia, Pa.

Yearly Subscription, \$2.00.

Single Numbers, 20 cts.

W. B. SAUNDERS, PUBLISHER,  
913 WALNUT STREET,  
Philadelphia, Pa.



